

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### Doctor Down

#### Montana Manufacturing Extension Center

#### When Opportunity Knocks: Complacency Not an Option

##### Client Profile:

Doctor Down, located in Polson, Montana, manufactures an innovative, high quality, medical transport bedding system called the Rescue Wrap®. The system is used successfully in many different applications from air and ground ambulances, search and rescue teams and National Park emergency medical stations to military medical trauma teams, and industrial first aid management worldwide. It was patented and approved by the Food and Drug Administration (FDA) in 1994. The Rescue Wrap® system was originally designed for mobile health care providers to keep patients warm and dry while providing easy, unlimited access to injuries. It helps organize intravenous lines and improves patient comfort. The design was conceived after an inquiry came in from a Montana flight rescue company requesting a sleeping-bag-type product to replace 30 pounds of blankets it had been using in patient transport. All design improvements have been customer focused and health safety conscious. The domestic market for the product has been constant with growth averaging about 20 percent each year.

##### Situation:

Several years ago, what had been steady growth at Doctor Down began to look like exponential growth. The Department of Defense (DoD) became interested in the Rescue Wrap®. Fortunately, at Doctor Down this was recognized as a market opportunity. The product gained exposure during television news coverage of the Pfc. Jessica Lynch rescue in Iraq. The Wrap was used to keep her warm and comfortable during transport from the rescue site to a U.S. medical post. Handling such trauma inspired additional versions of the product. The US Army's initial interest for 10,000 bags has snowballed into other opportunities, but delivering to the DoD is not easy. For many years, Doctor Down has subcontracted most of its sewing to small companies in the area, doing repair and development in-house. With DoD interest, capacity became an issue. After arranging additional financial backing and help from Montana Procurement Technical Assistance (PTAC), the owner reached out for assistance from Montana Manufacturing Extension Center (MMEC), a NIST MEP network affiliate, to address capacity and business systems.

##### Solution:

After providing some initial costing assistance, MMEC pulled in its MilTech services to ensure that DoD contracts could be met. MilTech is a unique MMEC partnership with TechLink at Montana State University, designed to "accelerate the transition of new technology to the U.S. warfighter." The program was able to offer a co-pay arrangement that helped get the owner on board. MMEC's local field engineer created an action items list for the company to address questions like, "What's slowing you down?"

Under the Lean umbrella, the improvement team identified non-value added tasks that limit efficiencies, crossing them off one at a time, as solutions are put into place. MMEC designed an easy-to-use scheduling tool and capacity model that helps the team visualize and handle the fluctuations in

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orders and looks out past the immediate calendar. Communications tools were beefed up for in-house staff and several improvement projects are bringing in expertise from other consultants in Montana. The owner said he is getting affordable assistance and counseling on business that he can't do himself. Initially, the capacity tool helped highlight unacceptable lead times and brought to light the need to find more capacity. The owner notes that key to his business plan is creating more jobs in Montana and helping sheltered workshops provide employment. While the domestic market has been consistent, military orders fluctuate from quiet times to the need for hundreds at a time. Building a strong supplier base in Montana and in neighboring states using sheltered workshops to manage fluctuation is part of the growth strategy.

Even without the DoD orders, the capacity tool helps to better manage the many small orders that routinely come into the company. The new scheduling model looks at production, pieces needed per week, products (the bedding system has disposable liners and other optional gear), and identifies constraints in product mix, helping ensure on-time delivery. It had a definite impact on meeting delivery within a specified timeframe because the owner can "see inside the pipe" -- invaluable for anyone with frustrations in production. With the MilTech jumpstart, the company has been able to deliver to DoD quickly, reliably and cost effectively by expanding production and further improve product quality. The tools built for Doctor Down monitor capacity bottlenecks and take the pressure off, according to the owner. They are presented in a way that a small business person can comprehend and enable quick decisions by flagging the constraints, plugging in a next level of sewing staff based on their capacity. MMEC MilTech assistance helped the company to find suppliers with competitive rates and high quality standards, with the special emphasis on sheltered workshops with textile skills. It continues to work with MMEC on manufacturing and business system improvements.

### Results:

- \* Increased sales and capability by 850 percent in 2005.
- \* DOD purchased over 1500 wraps in 2005.
- \* Increased orders by 30 percent in 2006.
- \* Created over 25 new jobs in Montana.
- \* Continued collaboration with MMEC's field engineer.

### Testimonial:

"Fulfilling the demand for DoD has been a definite homerun for us. I am proud to work with MMEC, not only because they have helped me become more successful but because they have allowed me to create over 25 new jobs for the state of Montana. All are in HUB zone certified regions and half are in sheltered workshops around the state. I like the Montana flavor of MMEC. The field staff are not "suits" but down to earth, committed to manufacturing and Montana."

Bob Ricketts, CEO